



Planning Approach

Loudoun County is an exceptional place. Balancing the variety of interests while charting a new course for the County is challenging. However, after a decade of record-breaking growth the community has decided it is time to set new priorities and policies to guide its future development.

The *Revised General Plan* carries forward the central concept that development should be systematic, in compact communities, and in the right location, in order to function well and enable the County to provide adequate, and cost-efficient, public services. The Plan will enable the Board of Supervisors to exercise its public responsibility to protect the best long-term interests of Loudoun County and its residents.

This Plan establishes the environmental, natural, and heritage features of the County's Green Infrastructure as a single, unifying element for the County as a whole. Strategies to implement this concept include conservation design development standards and strengthened open-space policies. The *Revised General Plan* also establishes a new Transition Policy Area that will serve as a separation between the Suburban and Rural Policy Areas and that has a transition of uses, incorporating elements of both suburban and rural design to create truly unique countryside developments.

Demographic and Economic Trends and Characteristics

To develop a meaningful plan, it is important to understand the growth pressures that have occurred in the past ten years and that are expected to occur in the County over the Plan's planning horizon of the next twenty years. Trends, projections, and assumptions provide a numerical benchmark to help determine if the Plan is realistic and reasonable. The County, with public input, makes annual estimates of the basic demographic and economic factors affecting development and growth. These estimates are published in the "Annual Growth Summary" document and are used as input for the County's fiscal impact model. Important trends, projections, and planning assumptions are summarized below.

A. Population

Loudoun County's population was relatively unchanged between 1790, the first year that the U.S. Census was taken, and 1960. Throughout the 170-year period, it remained in the range of 20,000 to 25,000 persons, reflecting the stability of a predominantly rural county at the far western reaches of the Washington region. Transportation facilities, including Leesburg Pike (Route 7), Little River Turnpike (U.S. 50) and the Washington & Old Dominion (W&OD) Railroad, provided early links to the region. Farmers and merchants used the routes to transport their products to the broader market, and District of Columbia residents used them to retreat to the countryside.

This picture began changing in 1960, with population growth in neighboring Fairfax County, construction of the Broad Run Interceptor that would provide sewer service for suburban development in the eastern part of Loudoun County, and the construction of Washington Dulles International Airport in Fairfax and Loudoun counties. When the airport was built in the mid-1960s on a 10,000-acre site mostly inside Loudoun, much of the land around it was rezoned for industrial uses to accommodate businesses related to the airport. This marked the beginning of a dramatic shift in how rural land outside of Loudoun's Towns would be developed. At the time, the Towns were the centers of population and commerce in the County, and land beyond their corporate limits was planned for rural residential or agricultural uses. The airport set a new course for the County, one whose scope recently has come into focus as telecommunication giants such as America Online and WorldCom have invested in this community.

During the 1960s, and in each decade that followed, the County's population has risen by at least 50 percent. This population shift from 24,549 in 1960 and to 86,129 in 1990 amounted to 250 percent. By 2000, Loudoun's population had nearly doubled again to an estimated 169,599.

Most of the County's recent growth is due to migration into the County, particularly into the Suburban Policy

Area, which experienced a 128 percent increase in population from 1990 to 2000. In 2000, eastern Loudoun's Suburban Policy Area had an estimated population of more than 106,550 persons and the Rural Policy Area had an estimated population of 22,160 persons. The seven incorporated Towns had a combined population of 34,540 persons and their Joint Land Management Areas (JLMAs) had more than 5,000 persons. Nearly 1,250 persons lived in the Transition Policy Area.

B. Housing

Over the last fifty years, the number of housing units in Loudoun County has increased by almost 1,000 percent. In 1950, there were 5,988 units in the County. In 2000, there were over 60,000 units. The greatest increase has been since 1990, when nearly half of the County's housing stock was built. During the 1990s, one in four building permits issued in Northern Virginia was issued in Loudoun County. The number issued here (39,270 permits) was surpassed only in Fairfax County.

During this time, the County's housing stock also became more diverse. Today, single-family detached housing remains the dominant type, though its proportionate share of the housing stock is declining. Single-family detached houses represented 65 percent of the overall housing inventory in 1990 and declined to 56 percent in 2000. Single-family attached units in 2000 represent 25 percent of the housing stock and multi-family units reflect 19 percent. Townhouses and multi-family units have been built in areas zoned for them in the Suburban Policy Area and in the Towns and their JLMAs.

Three-fourths of the residential building permits issued by the County during the 1990s were for new homes in the Suburban Policy Area. The prevailing development pattern in the Rural Policy Area has been single-family detached homes in 3-acre lot subdivisions. However, some innovative approaches to rural residential development, including the rural hamlet and village concepts, were implemented in the Rural Policy Area following the adoption of the 1991 *General Plan*.

The number of persons per household in Loudoun declined from 3.94 in 1950 to 2.80 in 1990, but recent data suggest a shift toward larger households. In 2000, the overall household size was 2.82, with single-family detached homes averaging 3.1 persons per household, townhouses 2.8 persons, and multi-family units 2.0 persons.



As Loudoun's housing stock has become increasingly diverse, single-family attached and multi-family units have been built in the Suburban Policy Area and in the Towns and their JLMAs.

C. Employment

The number of jobs more than doubled in the past ten years, increasing from 40,000 in 1990 to more than 87,000 in 2000. This almost 120-percent rise in at-place employment was due to the addition of more than 2,000 new companies, including several major employers, which sparked commercial construction activity at a scale unprecedented in Loudoun County. Non-residential space tripled during the decade to nearly 30 million square feet. Economic development affected every land use category, with a significant move toward construction of office space and technology centers.

Much of the recent economic development activity in the County can be attributed to its strategic position within the Washington D.C. Metropolitan Region, one of the nation's most prosperous metropolitan areas, and its proximity to a primary driver of new investment in the region, Washington Dulles International Airport. As a result of Loudoun's unique combination of assets, at-place employment is expected to continue to grow over the next twenty years reaching almost 200,000 jobs by 2020. Many of the workers filling those jobs want homes near their jobs and need additional retail and other services, so the market demand for both residential and non-residential development is expected to continue.

As new company growth and expansion take place in Loudoun, it is likely that the types of industries will parallel those of Fairfax County's recent past as available sites become increasingly less available there. There will likely be continued attraction of high technology businesses to the County because of the skilled labor pool, complementary types of high technology businesses, symbiotic business interrelationships, Washington Dulles

International Airport and the availability of necessary support services.



America Online, one of Loudoun's largest employers, located here in 1996.

New households and new businesses have been attracted to Loudoun for very similar reasons. The following factors, in no particular order of priority, are considered as critical to determining the competitiveness of a residential location: access to employment concentrations, highway accessibility, proximity to local-serving and regional retail concentration, quality of schools, variety of housing options, proximity to recreation and cultural opportunities, relative proximity to an airport, natural amenities and availability of developable land. As has been the case in more developed jurisdictions like Fairfax and Montgomery counties, over time the percentage of those County residents who also work in the County is likely to increase to the 55 to 60 percent level.

D. County Resident Survey

Every two years the County conducts a telephone survey of 1,000 residents to find out how they feel about living in Loudoun County. The survey also provides a demographic snapshot of who lives here and why. In the 1999 Survey of Loudoun County Residents, more than one in four participants had lived in the County for three years or less. Just over half had moved to Loudoun either from Fairfax County or from other parts of the Washington D.C. Metropolitan Region. Most of the new residents who moved into Loudoun cited proximity to work, housing affordability, and Loudoun's rural character as major factors in their location decisions.

The average age of 1999 survey participants was 30.9 years, reflecting the large number of young adults who have moved to the County to work in the growing technology sector. More than half of those surveyed had annual

household incomes of at least \$75,000; almost one in three (29 percent) had incomes that exceeded \$100,000. Two-thirds said they were residing in single-family, detached homes, and most respondents (87 percent) owned their residences.

Forty-four percent said they had school-age children, with most of the students attending public schools (87 percent), 12 percent attending private schools, and 4 percent being schooled at home. These numbers reflect the rapid growth in the County's school-age population and the increasing number of students attending Loudoun County Public Schools. Public school enrollment increased from 14,632 in 1990 to more than 31,800 in 2000.

E. Loudoun's Place in the Region

All but one of the 24 jurisdictions that comprise the Washington D.C.-MD-VA-WV Primary Metropolitan Statistical Area (PMSA) increased in population from 1990 to 2000. Within the PMSA, the District of Columbia lost 34,841 residents (16 percent), while Northern Virginia gained 435,380 residents (25 percent), Suburban Maryland gained 276,213 residents (15 percent), and the West Virginia Panhandle gained 22,916 residents (24 percent). Though Loudoun's growth rate was the highest, two jurisdictions experienced a larger population increase: Fairfax County, Virginia gained 151,165 residents and Montgomery County, Maryland increased by 116,314 persons.

In Northern Virginia, Loudoun's share of the regional population increased from 5 percent in 1990 to 8 percent in 2000. Fairfax County's share of regional population declined during that period, from 47 percent to 45 percent. Significant increases were also experienced in Prince William, Stafford, and Spotsylvania Counties.

Other demographic changes that occurred between 1990 and 2000 include Loudoun's median age, which increased from 31.5 years to 33.6 years, and Loudoun's average household income, which grew from \$72,433 to \$97,987. In both cases, these increases were at lower rates than the Northern Virginia and Washington Metropolitan Areas.

From 1990 to 2000, Loudoun's share of employment in Northern Virginia increased from 4.6 percent to 8.5 percent - an increase of more than 85 percent. In 2000, Fairfax County accounted for more than 50 percent of all jobs in Northern Virginia, Arlington County accounted for more than 15 percent, and Alexandria accounted for nearly 9 percent.



The Washington Dulles International Airport is the economic engine for the region, contributing significantly to Loudoun's growth.

In general, the westward growth of the Metropolitan area in terms of population and employment has significantly affected Loudoun County over the past several years. While some of the growth is attributable to the expansion of Washington Dulles International Airport, rapid growth in Fairfax County and transportation improvements, including the construction of the Dulles Greenway, and improvements to Route 7, Route 28, and Route 50, all have substantially increased the County's accessibility and competitiveness. The privately funded toll road opened in 1995 as a 14-mile extension of the Dulles Toll Road and has positioned western Loudoun within commuting distance of high-paying jobs in the Region's core. Also benefiting from the road improvements are residents of other counties who now commute to Loudoun's major employers.

The growth and near build-out of the Reston area and the Toll Road corridor in Fairfax County have facilitated rapid growth in the Route 28 corridor, which extends from Route 7, south to Centreville in Fairfax County. The radial expansion of the Washington D.C. Metropolitan Region now clearly includes eastern Loudoun's Suburban Policy Area. As a result, the County has become an active participant in regional policy deliberations and decision-making. This role will be increasingly important, particularly with respect to housing and transportation initiatives.

Planning Assumptions and Forecasts

The County has been concerned about the rate of population increase over the last five years because of its fiscal impact and the ability of the County to provide schools and essential public services in a timely fashion.

The issue of housing provision is considered from a regional perspective as it relates to the segment of the housing market that Loudoun County is accommodating. Housing demand is driven primarily by three factors: regional employment growth, the number of households generated by each new job and the percentage of household growth generated by each employment concentration that Loudoun County would most likely capture (i.e., the percentage of those working in a particular area who would most likely choose to live in Loudoun). The majority of demand for housing in Loudoun will emanate from the employment growth within Northern Virginia. Over the ten-year (1990-2000) period, Northern Virginia captured 74 percent of all net, new jobs in the Washington D.C. Metropolitan Region and Loudoun captured 15 percent of the total. Loudoun and Fairfax Counties accounted for more than one-half of all net new jobs in the region over this ten-year period.

Using an employment driven model, long term household demand in Loudoun has been determined under four scenarios: conservative, moderate, aggressive, and highly aggressive. The highly aggressive scenario reflects a situation in which a significant share of regional growth is occurring in western Fairfax County and Loudoun County, while the conservative scenario anticipates a wider distribution of regional growth. The moderate, aggressive and highly aggressive scenarios all project significantly more employment growth in Loudoun County than Metropolitan Washington Council of Governments (COG) forecasts. All of the scenarios project significantly greater growth in western Fairfax County than COG has forecasted.

Given the expectations about the likelihood of continued employment growth in Loudoun and western Fairfax over the next twenty years, and the continued desirability of Loudoun County as a residential location for those working in these areas, relative to other locations with available supply, the aggressive scenario seems most likely. In this scenario 95,800 new households (4,720 annually) will demand housing in Loudoun. Factors such as the availability of desirable sites, shifts in the industry mix of employment growth, major transportation initiatives and changing trends in regional growth might affect the accuracy of this prediction.

As of March 2001, there was a backlog of 37,030 approved but unbuilt dwelling units in the "pipeline." The County cannot control the pace at which these units will be absorbed, but does have the ability to control the supply of land for housing and the density of residential development. Therefore, the *Revised General Plan* makes substantial changes from the 1991 *General Plan* regarding

the potential total build out projections as shown in the following table:

| Policy Area | 1991 General Plan | Revised General Plan |
|-------------|-------------------|----------------------|
| Pipeline | 37,030 | 37,030 |
| Suburban | 33,906 | 30,850 |
| Transition | 23,401 | 11,559 |
| Rural | 58,444 | 12,542 |
| Towns/JLMAs | 33,970 | 11,613 |
| Total | 186,751 | 103,593 |

Under the *Revised General Plan*, there would be a 45 percent reduction in the maximum number of housing units that could be built.

General Plan Strategy

The *Revised General Plan* is the policy foundation for creating a county that in the future does not lose touch with its past. The planning strategy presented in this document is a product of the long-term vision of the Board of Supervisors embodied in the Smart Growth and Revitalization Principles, the guidance of the Planning Commission, and invaluable input from the community. The key elements of that strategy can be summarized as follows.

1. Green Infrastructure

An overarching change in this Plan is the integration of Loudoun's natural, environmental, cultural and heritage resources into a unified Green Infrastructure strategy. The Green Infrastructure will shape land uses throughout the County in all policy areas. It will be a structuring element of development, with its features becoming a part of every new project through the use of conservation design as the preferred project planning technique. The County is committed to the preservation and enhancement of its Green Infrastructure assets for their economic value and contribution to the quality of life of present and future residents.

2. Fiscal Planning and Management

The strategy provides for the close integration of land use planning, fiscal management, County service plans and capital facilities development required by a rapidly

expanding population, and at an affordable cost to the County's taxpayers. This integrated strategic management approach not only addresses the short-term and long-term needs of Loudoun's citizens, but also operates within a regional context to maximize opportunities and to resolve multi-jurisdictional issues.

3. Economic Development and Housing

The *Revised General Plan* integrates economic development planning with land use planning in order to sustain Loudoun's competitive advantage in a global market place and in recognition that an efficient, strong, diverse and resilient economy is essential to the achievement of Loudoun's overall development objectives. The creation of sustainable housing to assure that all existing and future County residents are served by a range of housing opportunities is inextricably linked to these economic development goals.

4. Infrastructure

The community's infrastructure systems including water and wastewater, solid waste management, roads, energy and telecommunications must complement the land use strategy. Because the County does not completely control the provision of these vital infrastructure components, careful coordination is necessary. The *Revised Countywide Transportation Plan*, the Loudoun County Sewer and Water Master Plan and the Loudoun County Solid Waste Management Plan are documents which serve to reinforce and implement this strategy.

5. Geographic Planning Policy Areas (Refer to Policy Areas Map, pg. 2-7.)

The County's ultimate development pattern will be based on the long-term commitment to maintaining distinct Suburban, Transition, Rural, and Town Policy Areas. (Refer to Existing Land Use Map, pg. 2-9.) Each policy area has a preferred development pattern that is distinct and that will determine the location of public infrastructure and facilities over the next twenty years. In all policy areas the Plan seeks compact residential development through clustering with ample open space, and the protection of Green Infrastructure assets. Further, it is intended that the County Zoning Map reflect the land uses called for in the Plan. (See Planned Land Use Map, pg. 7-23)

The strategy for residential densities is to start with higher densities around transit nodes and urban centers in the Suburban Policy Area, moving to lower clustered suburban densities in the Transition Policy Area and then to still lower rural by right densities in the Rural Policy Area. This approach provides an internally consistent density pattern that provides an appropriate location for all of the County's desired housing types, lot sizes, neighborhoods, and communities.



Over the next 20 years, the Suburban Policy Area will continue to build out in a pattern of residential neighborhoods, town centers, and regional business centers linked by a network of roads, linear parks, and open spaces.

The Plan reaffirms an Urban Growth Boundary (UGB) beyond which central sewer and water is not allowed. Beginning in the north, the UGB follows the Suburban Policy Area boundary to the point where it joins with the western edge of the Lower Foley subarea. There is also a UGB that applies to the Towns. Where there are Town Joint Land Management Areas (JLMAs) the boundaries of the JLMA serve as the UGB.

a. Suburban Policy Area

Eastern Loudoun is the Suburban Policy Area. The Plan identifies four large communities: Ashburn, Dulles, Potomac, and Sterling. Each will be the subject of individual Community Plans to ensure that they are well designed and serviced and that they provide diverse and stimulating social, cultural, recreational and spiritual environments for their residents.

Over the next twenty years, it is anticipated that the Suburban Policy Area will continue to build out in a suburban pattern as a low-density fringe

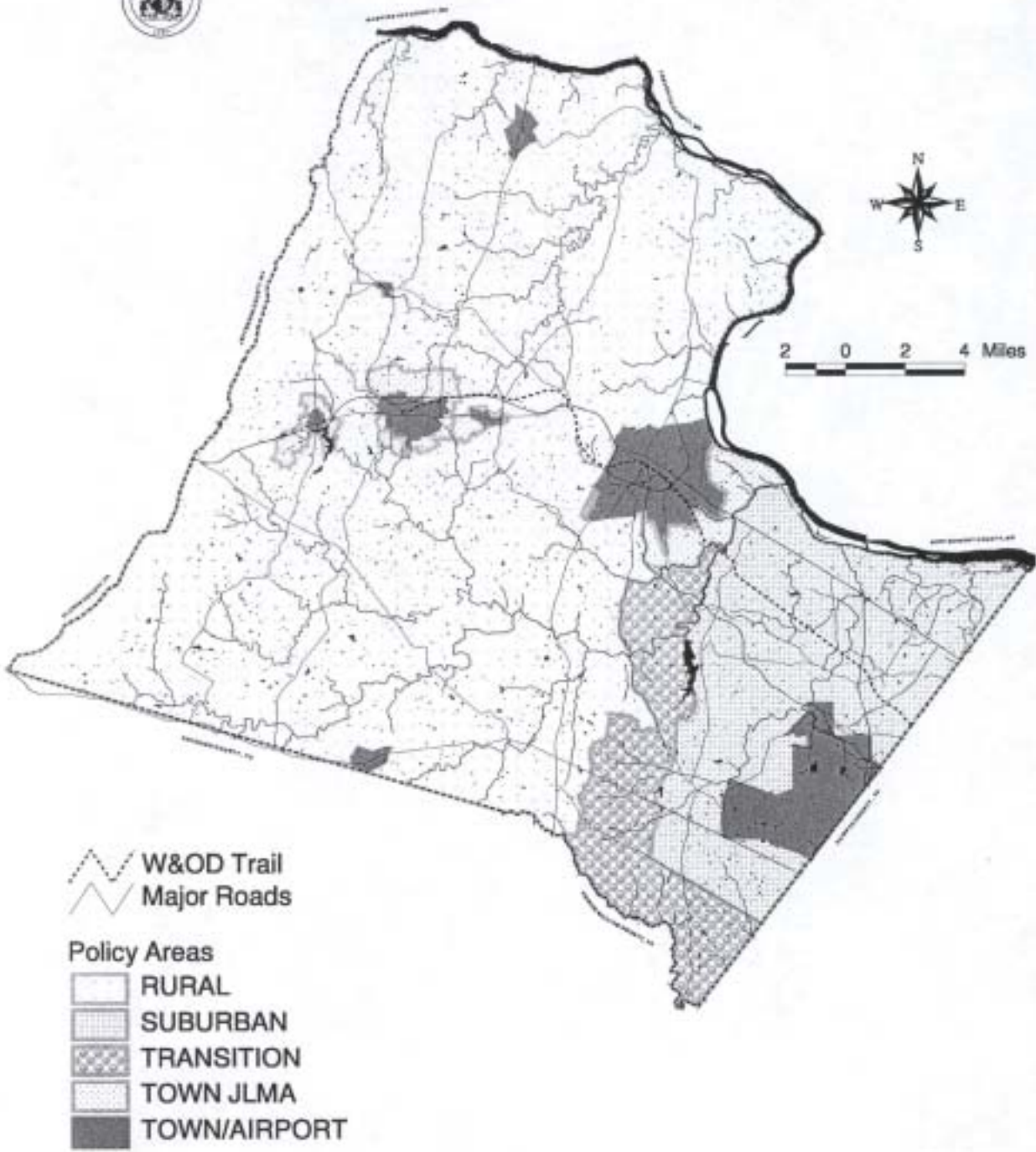
to the Washington D.C. Metropolitan Region. The area will be characterized by a pattern of residential neighborhoods, town centers, and regional business centers linked by a substantial network of roads, linear parks, and open spaces. As existing neighborhoods mature, redevelopment and revitalization plans will be developed to ensure the continuing vitality of these areas. A "hard" utility edge (marking the limits of central sewer and water) is maintained by the western boundary of the Suburban Policy Area establishing an urban growth boundary.

As express bus (expected in 2004) and eventually bus rapid transit (expected in 2010) and rail become available, higher-density land uses along major thoroughfares will become appropriate. Transit nodes and urban centers including a mix of uses and transportation modes will develop. Very compact in form, they will be designed for full pedestrian access and served by mass transit. The first nodes will appear along the Dulles Greenway corridor, where right-of-way exists for a rail transit corridor, and in in-fill areas within existing developments. "Downtowns" in each of the four communities will be considered as part of the redevelopment strategy to be detailed in the Community Plan process.



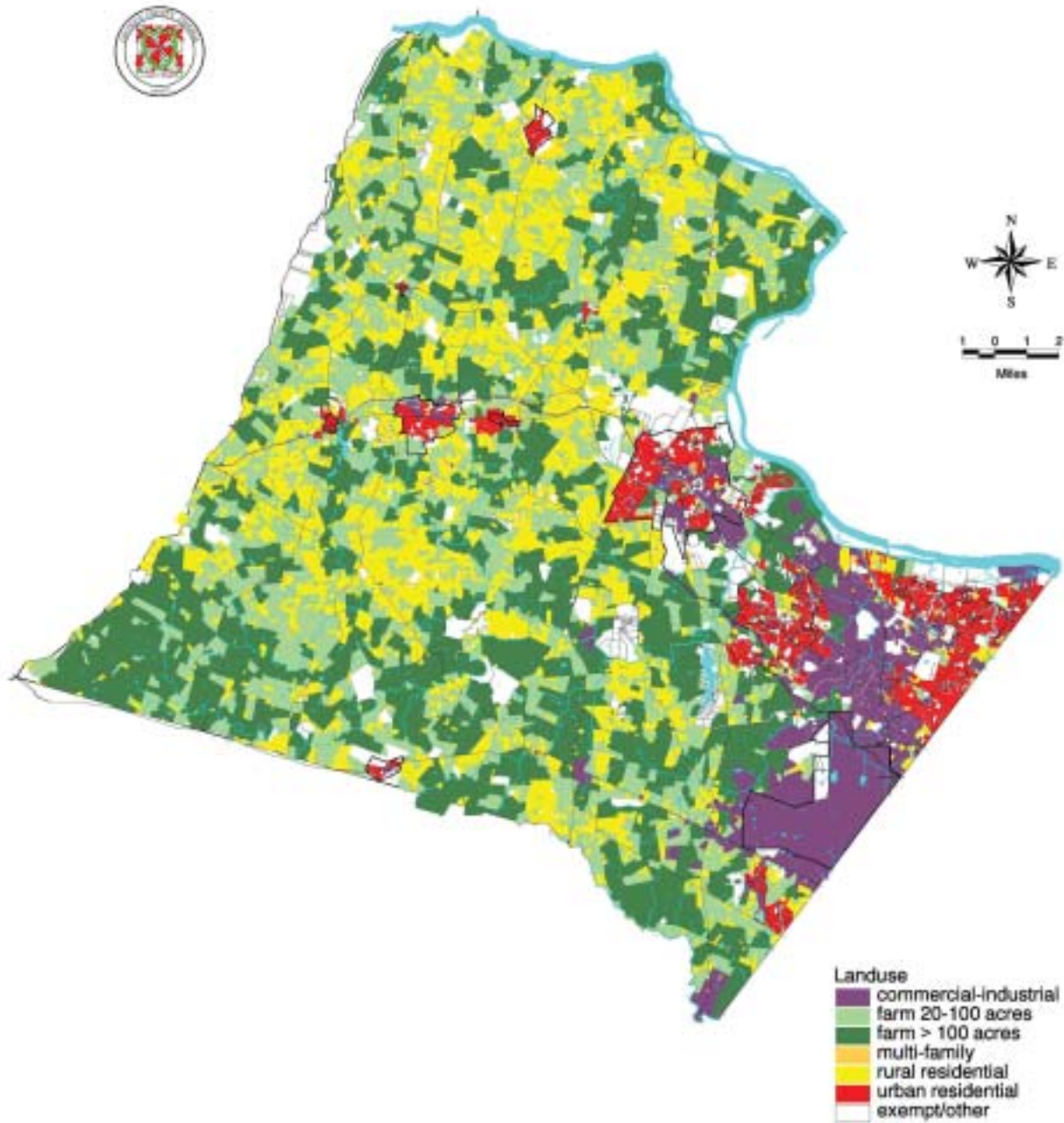
Unpaved roads are an integral part of the Rural Policy Area's character, and maintaining this character is of paramount importance.

Policy Areas



Map Number: CPRV-W-071

Existing Landuse



b. Rural Policy Area

The rural heritage and economy that has given Loudoun its truly unique character for more than two centuries must be preserved and enhanced. Although some development may occur in clusters, overall residential use in the policy area will be limited in order to retain the economic, ecological, and scenic value of the countryside. Conservation and cluster design of residential areas, along with the permanent protection of undeveloped land, will protect the area's rural character and significantly enhance the rural economy. Public investment is directed to the provision of incentives to landowners and businesses that manage their land according to the Plan.

The southern tier of the Rural Policy Area will provide for residential densities of one dwelling unit per 50 acres or one dwelling unit per 20 acres, if clustered, to reinforce the existing low-density pattern and ensure retention of rural economic uses. Residential development will be allowed in the balance of the Rural Policy Area at densities of one dwelling unit per 20 acres or one dwelling unit per 10 acres, if clustered. Clusters will incorporate conservation design techniques. Provisions to allow subdivision for farm viability and family will be made as long as net densities are not exceeded.

As a matter of policy, the Plan calls for the preservation of unpaved rural roads in their present condition. These roads are an integral part of rural character and maintaining this character is of paramount importance. The major expenditures necessary to upgrade rural roads and the limited funds available further justify the significant reduction in rural densities.

c. Transition Policy Area

The *Revised General Plan* clarifies the distinction between the Suburban Policy Area and the Rural Policy Area. One of the most significant new tools for achieving that distinction is the creation of the Transition Policy Area that lies, for the most part, directly between the two. By providing a transition in terms of development pattern, the Transition Policy Area offers the opportunity to incorporate visual and spatial characteristics of

both rural and suburban development into new projects.

The Transition Policy Area will have a combination of villages and clustered residential neighborhoods as well as larger lot development that provides for surrounding eased open space and the full implementation of Green Infrastructure policies. Residential development at one dwelling unit per 3 acres, that is sensitive to the environment and the Bull Run, will be provided in the Lower Bull Run subarea. In this regard, density transfer will also be encouraged from the Lower Bull Run subarea to the Lower Foley subarea. The option to rezone to Rural Villages at one dwelling unit per 3 acres will also be provided. In the Middle Goose and Lower Sycolin subareas, residential neighborhoods will be clustered at one dwelling unit per 10 acres. The option to rezone to Rural Villages at one dwelling unit per 3 acres will be provided. Clustered residential neighborhoods at densities up to one dwelling unit per 3 acres or one acre in the Lower Foley, Upper Broad Run and Upper Foley subareas will be provided. Opportunities to rezone for Countryside Villages up to two dwelling units per acre in the Lower Foley subarea will be possible. And as a potential receiving area for density transfer from the Lower Bull Run subarea, the Countryside Villages in Lower Foley could be considered for up to three dwelling units per acre.

Central water and sewer service is planned for the Lower Foley and Lower Bull Run subareas. Central water and sewer service is not to be extended to the Upper Broad Run and Upper Foley subareas. The Middle Goose and Lower Sycolin subareas will not have public water and sewer with the exception of central water for properties within the Landfill Water Service Area/District. Communal systems will be encouraged over individual systems in areas without central utilities.

d. The Towns - Joint Land Management Areas (JLMAs)

Healthy and vibrant towns and villages in Loudoun are key to the success of the Plan's strategy. The County has seven incorporated

Towns that govern land planning and zoning within their boundaries. The Plan establishes a policy area specifically for land in JLMAs adjacent to Leesburg, Purcellville, Round Hill, and Hamilton. The densities in the JLMAs include one dwelling unit per 3 acres one dwelling unit per acre and two dwelling units per acre. Denser development with a mix of uses is anticipated in the designated growth areas around the Towns, where town utilities will be available to serve development that is compatible in design with the existing Towns. The County recognizes the critical importance of the Towns to the overall development of the County, and policies in this revised Plan encourage the County's close cooperation with and support to the Towns in order to achieve mutually beneficial goals.

Housing

An adequate supply of varied types of housing in convenient locations is a fundamental ingredient of an enduring community. The creation of sustainable housing requires that the pattern of residential development - its design, density, location, and performance - benefit the user now and over time. The primary housing objective is to assure that all existing and future County residents can be served by a range of housing opportunities. To accomplish this purpose, a diversity of housing types in a broad range of prices should be provided. Housing opportunities must be available in all areas of the County. Housing for special populations incorporating a programmatic approach also must be furnished.

The supply of housing (unit types and prices) is largely a function of market dynamics. The residential market plays the primary role in the type of housing to be constructed, based upon regional demands for specific housing types and the potential return on investment for the developer. If supply for a particular housing product is constrained and demand for that product is high, then prices will increase. If there is anticipation that the supply of a desired product may become constrained in the future, prices will also increase. If the price becomes too high, substitution may occur through selection of a different housing type or shift to an alternative market.



The demand for housing has increased over the past few years. Townhouse and condominium units have gained a greater share of the for-sale market.

Housing production involves “hard” and “soft” costs. “Hard” costs include the purchase price of land, site preparation and construction and marketing the product. The “soft” costs include financing, construction loans, bonds for site preparation, settlement costs related to the sale of the product, governmental fees, permits, proffers, and amenities. These costs are passed on to the consumer of the product.

As total demand for housing in Loudoun has increased over the past four years, townhouse and condominium units have gained a greater share of the for-sale market, while single-family detached homes and lots have accounted for a decreasing share. In 1990, single-family detached units represented 65 percent of the county's housing stock, whereas single-family attached units constituted 19 percent and multi-family units constituted 14 percent. By 2000, single-family detached units represented 56 percent of all homes; single-family attached units 25 percent, and multi-family units, 19 percent. By 2000, detached homes and lots accounted for only 50 percent of sales, compared to 58 percent of sales in 1990. The increased market share of the townhouse and condominium products as mentioned earlier is linked to the strong employment growth in and around the County. These additional jobs create demand from additional households, many of which are seeking a smaller and more affordable housing unit than a detached home. Increased employment growth in and around the County will attract a larger percentage of renter households than in the past, although it is still projected that 80 percent of new household growth in Loudoun over the next twenty years will be homeowners.

The County can influence the housing market by encouraging or requiring a clustered pattern of development

and mixed-use communities requiring a diversity of housing types. To achieve this, the County can allow higher densities that are close to employment and town centers where adequate water, sewer, roads, schools, open space, and recreation are in place. In and of themselves, increased densities are not the answer to influencing the market. Flexibility in lot sizes, setback requirements, a relaxation of use restrictions and programmatic options are also necessary to achieve the desired product mix. The County can also allow accessory and second-story apartments in existing villages and rural clusters and provide for a variety of unit types to be developed in designated JLMAs around the towns that have them.

A. Affordable Housing

Housing affordability has long been an issue in the Washington D.C. Metropolitan Region housing market. Affordability becomes a problem when housing prices exceed an acceptable percentage of a household's disposable income. When confronted by high housing prices relative to household incomes, households that are determined to reside in the metropolitan area can either pay a disproportionately large amount of their income to secure housing or pay less and secure lower quality or less adequate housing. The Board of Supervisors, in developing Loudoun County's approach, has recognized affordable housing as an economic, transportation, and quality-of-life issue. As is the case in the region, while the County is providing a significant share of its housing, prices and rents are at a level that is too costly for many workers. Workers filling jobs in Loudoun often live in other jurisdictions and generate traffic on local roads as they travel to work. The lack of affordably priced housing also has an impact on the continued ability to attract a diversified employment base.

In 1990, the Board of Supervisors adopted a definition for "affordable" housing to include fulfilling the housing needs of County residents with incomes ranging from 30 percent to 70 percent of the county's median household income. Generally, rental units should house residents earning 30 percent to 50 percent of the County's median income. The units should be available at annual prices equal to 30 percent of income (exclusive of utilities). Generally, those residents with incomes at 50 percent to 70 percent should be able to purchase housing. For-sale units should be available at 2.5 times that income.

Building on the commitment to and definition of affordable housing, the County has adopted ordinances and programs focused on the actual production of affordable units. By developing the Affordable Dwelling

Unit (ADU) Ordinance and program in 1993, the County took advantage of state enabling legislation that allows a locality to mandate the construction of dwelling units in an affordable price range to ensure a variety of housing prices in the market. The program requires the construction and continued existence of dwelling units that are affordable for purchase or rent in accordance with the Board's definition of affordable for the Primary Metropolitan Statistical Area (PMSA).

Part of the affordability issue includes developing strategies to retain the existing supply of owner-occupied housing and the existing supply of subsidized units. As such, the Plan recommends other programmatic initiatives aimed at revitalization, renovation, and restoration of the existing stock, development of manufactured housing, and that the government plays a larger role in the provision of housing opportunities.



The County supports the location of age-restricted communities, such as Leisure World of Virginia, which are fully integrated into the community.

B. Housing for Special Needs Populations

Special populations include low-income residents (incomes below the 30-percent affordable minimum), elderly residents requiring congregate care, disabled residents, and the homeless. The provision of housing for these populations often requires heavy subsidies, which have historically been provided by the federal and state governments. Given the reduction of federal and state assistance, the County is committed to the formation of public and private partnerships to support the development of housing for people who are elderly, disabled, or living on very low incomes.

C. Adult/Retirement Housing

The County recognizes the increasing need for housing for the active elderly as the population continues to age and supports the location of age-restricted retirement communities in the County. Such uses should be a component of other housing or mixed-use projects so that residents can be fully integrated into the community. Housing for the active elderly also should incorporate on-site facilities and services or ensure that residents have convenient access to needed services and amenities. Such housing is typically moderate-to-high density development and therefore is encouraged in the Suburban Policy Area and the towns.

Housing Policies

1. The County will initiate a regional cooperative effort with neighboring jurisdictions to establish a dialogue and programs to address the provision of a healthy balance of jobs and housing in each jurisdiction.
2. The County encourages a variety of housing types and innovative designs to be developed in mixed-use communities to assist in achieving affordable housing goals.
3. The County will require a mix of housing options appropriately located in communities to support a balanced development program.
4. The County will identify options for affordable housing development in the Transition Policy Area not covered by the ADU zoning ordinance and work toward an implementation plan.
5. The County will provide technical planning expertise and financial support to the Towns to assist them in establishing redevelopment and revitalization programs that provide affordable housing. Such programs might include a revitalization tax program, housing rehabilitation, the development of regulations that allow for a broad range of housing types and upper story residential uses over stores, etc.
6. The maintenance, conservation, redevelopment, and improvement of existing residential development will be preferable development tools vs. new development on formerly non-residential land.
7. The County will encourage preservation by adaptive re-use of existing rural farm structures, such as barns, for the development of affordable dwelling units, as defined in the Zoning Ordinance and in accordance with the policies in the *Revised General Plan*.
8. The County requires that for land development applications proposing development of 50 or more dwelling units with a density greater than one dwelling unit per acre, located in an approved sewer service area, a percentage of the total number of dwellings will be developed as affordable units and given an appropriate density increase. The County will determine an average annual affordable housing production level by evaluating the affordable home ownership and rental needs of the projected population as relates to the County's fiscal capability to provide public services to new residential development.
9. The County will seek state enabling legislation to require the development of affordable dwelling units as part of developments less than 50 units.
10. The County will strengthen ADU Program regulations to do as much as the state code allows to require the development of affordable housing that is interspersed within neighborhoods, communities and throughout the County as a part of new development.
11. The County will seek state enabling legislation to eliminate the exemption from the ADU Ordinance of buildings with elevators that are four stories or higher.
12. The County will provide special incentives to stimulate the development of new housing projects when the applicant demonstrates the capacity to effect economic efficiencies in producing and sustaining rents and sale prices that meet the County's adopted definition of affordable.
13. Developers of residential and mixed-use projects are encouraged to include affordable housing proffers in their development proposals.
14. The County will establish a housing trust fund to provide a stable, broad-based funding source for affordable housing initiatives. The housing trust fund can be used to leverage federal, state, and other funding sources, provide down payments for first time home-buyers, to purchase land for the development of affordable housing, for construction gap financing, and rental assistance, etc.

15. The County will work in partnership with nonprofit and not-for-profit agencies committed to the provision of a wide range of affordable housing opportunities by offering technical and financial assistance.
16. The County will establish a Housing Authority as provided for by the State Code to develop new affordable housing, rehabilitate housing, and revitalize community infrastructure.
17. The County will develop and implement an employer-assisted housing program to help meet workers' housing needs.
18. The County will develop and implement a revitalization tax program for housing rehabilitation to conserve existing affordable housing.
19. The County endorses the formation and operation of a not-for-profit housing corporation to deliver affordable housing units that meet the Board of Supervisors' definition of affordable for sale and for rent units and provide for the housing needs of special populations.
20. The County will encourage the formation of public and private partnerships to develop housing for special populations that are integrated within existing and planned residential communities, particularly in areas within walking distance of convenience shopping and employment opportunities.
21. The County will amend the Zoning Ordinance to expand the number of districts where manufactured housing, accessory units, and other alternative housing types are allowed.
22. Adult/retirement communities are encouraged in areas where conventional residential development is also located, provided:
 - a. The proposed adult/retirement community includes on-site services and amenities to serve the elderly community or is within a safe walking distance to such services and amenities.
 - b. The proposed density and design of the adult/retirement community is compatible with surrounding residential and non-residential uses.
 - c. The proposed use is adequately served by roads, utilities, and other services.
 - d. The adult/retirement community complies with the relevant design and location criteria for Suburban Residential Neighborhoods.
 - e. The adult/retirement community is visually and physically integrated into adjacent communities.
23. The County will promote the formation of public and private partnerships for the provision of an affordable range of housing types throughout the County to address the needs of lower income families by facilitating the private provision of this housing in the County's regulations and by assisting in the utilization of state and federal programs.

Infrastructure

The community's infrastructure, including water and sanitation, solid waste management, roads, energy and telecommunications must complement its land use strategy. Loudoun County does not, however, completely control the provision of these vital systems. Water and wastewater are the responsibilities of the Loudoun County Sanitation Authority (LCSA), the Towns or individual property owners. Delivery of solid waste management services is in large part provided by the private sector and regulated by the state. Primary and secondary roads are primarily the Commonwealth's responsibility to build and maintain through the Virginia Department of Transportation (VDOT). Private developers provide for and maintain, through homeowner associations, private roads in their developments and typically proffer additional funding toward improvements of the regional road network. Electric, gas and telecommunication services are provided by the private sector. Nevertheless, the Plan policies provide necessary guidance to these entities to ensure their expansion.

A. Wastewater and Water Treatment

LCSA, created in 1959, is responsible for providing wastewater treatment services to unincorporated, developing areas of the County. The LCSA provides wastewater collection services through a network of interceptor and collection sewers in the eastern part of the County. Sewage from the eastern portion of the County is treated at the Blue Plains advanced Wastewater Treatment Plant in the District of Columbia. In 1999, the LCSA provided service to approximately 33,000 residential and business customers discharging approximately 8 million gallons of sewage per day. The County currently relies on Fairfax City's Goose Creek impoundment facility and the Fairfax County Potomac River intake as the major central water supply.

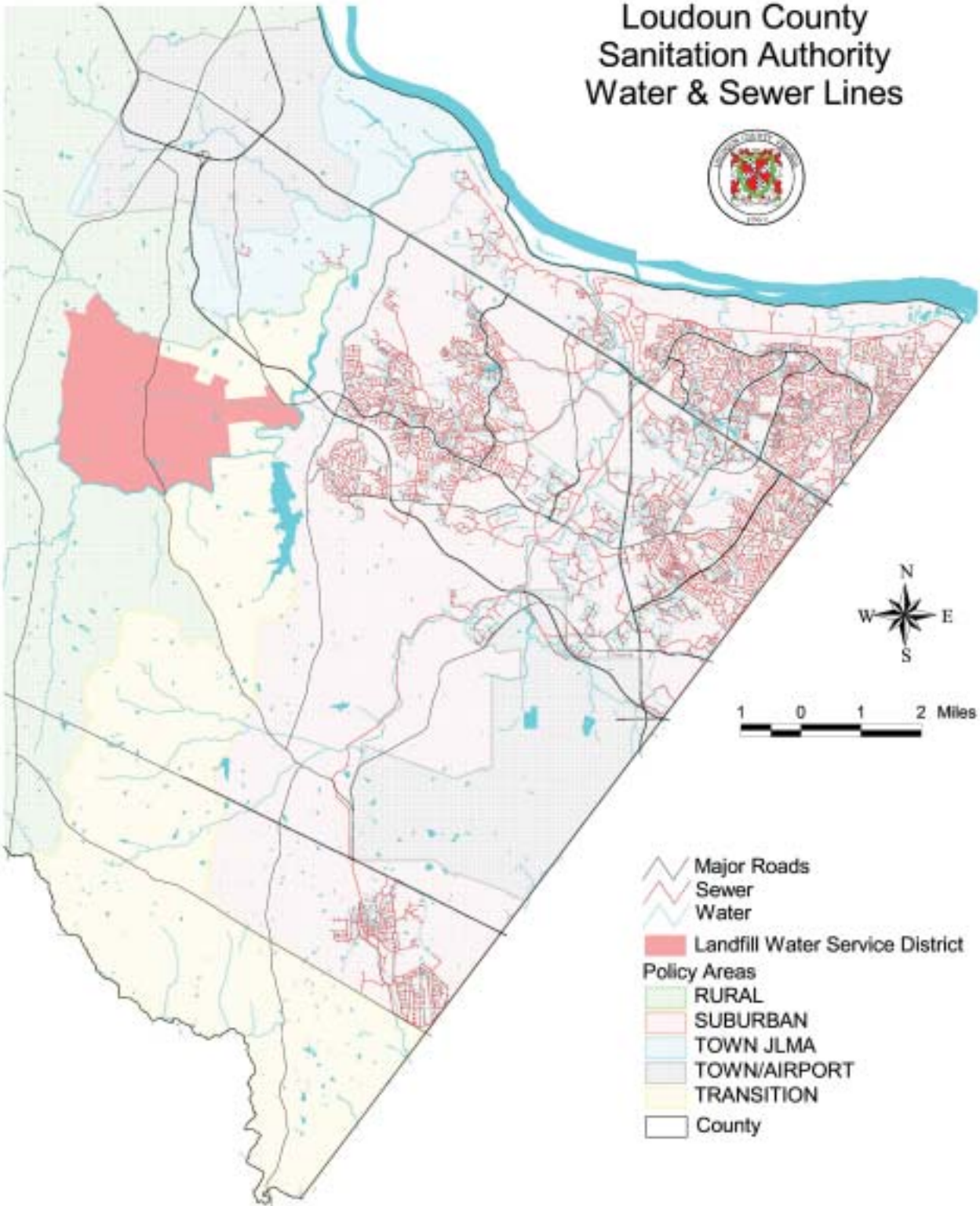
The LCSA is constructing an additional advanced wastewater treatment (AWT) facility on Broad Run to serve the eastern portion of the County and neighboring jurisdictions. The Dulles Area and Occoquan Watershed policies, which apply to the Goose Creek, Occoquan, and Broad Run watersheds, require advanced wastewater treatment to facilitate high removal rates for phosphorous, nitrogen, and biological oxygen demand. Although the Broad Run AWT will have an ultimate treatment capacity of 40 to 60 million gallons per day (mgd), the initial phase will accommodate approximately 10 mgd. A new trunk line, the Broad Run Interceptor, serves both the Occoquan and Upper Broad Run watersheds of Loudoun County. Sewage flow from the Occoquan Watershed is conveyed to the Broad Run plant through a system of pump stations to protect that drinking water watershed. The Blue Plains Treatment Facility and the Broad Run Treatment Facility will be able to accommodate the Suburban Policy Area's sewage treatment needs within the time frame of this Plan.

Water and wastewater treatment service levels and needs are not the same throughout the County, since proposed land uses, development densities and community character differ from area to area. The County will plan for the development of central sewer and water facilities and allow for the orderly extension of these facilities in the Suburban Policy Area and in portions of the Transition Policy Area. The County will encourage LCSA to serve this area in the most efficient and effective manner possible. In particular, the County will work with LCSA to encourage the extension of central utilities to existing communities within these areas. (Refer to LCSA Water and Sewer Lines Map, pg. 2-17.) Town central systems will continue to be the major service providers for the Towns' JLMAs.

In the Transition Policy Area and in the Rural Policy Area (including the Landfill Water Service Area District), the County will continue to focus its efforts on protecting public health by maintaining groundwater quality and quantity. Groundwater will continue to be the major source of water for most rural residents and therefore should be protected from the contamination threat of a proliferation of septic tanks and drainfields. As such, on-site, high-level pre-treatment, individual alternative systems and small advanced wastewater treatment systems for clustered development will be the primary methods of sewer service. Surface land application using these systems will be discouraged in the Transition Policy Area subareas given their proximity to the reservoirs. The County will seek to establish guidelines and oversight authority to ensure that these facilities function in an environmentally sound manner. The table below (Wastewater Approach) more simply portrays the wastewater strategy by policy area.

Wastewater Approach

| Policy Area | Central Systems | Clustered Communal Systems | Individual Systems |
|-------------------|-----------------|----------------------------|--------------------|
| Suburban | X | | |
| Transition | | | |
| • Middle Goose | | X | X |
| • Lower Sycolin | | X | X |
| • Lower Foley | X | X | X |
| • Upper Foley | | X | X |
| • Upper Broad Run | | X | X |
| • Lower Bull Run | X | X | X |
| Rural | | X | X |
| Towns & JLMAs | X | | |
| Existing Villages | | X | X |



Map Number: CPRV-W-053

General Water and Wastewater Policies

1. The County will work with the Loudoun County Sanitation Authority (LCSA) and officials of Towns to ensure timely provision of central sewer and water in accord with the land use policies of this Plan.
2. The County will evaluate further development proposals based upon the County's ability to treat, transmit, and distribute a safe and adequate potable water supply in accordance with the land use policies of this Plan.
3. Water and wastewater treatment and conveyance facilities will be planned, designed, and maintained to be compatible with County development and environmental goals while functioning at a high level of efficiency.
4. In planning for future central wastewater and water treatment facilities, the County will use water and sewer design capacity standards established by the LCSA. Where a standard has not been established by the LCSA, the County will use those established by the Virginia Department of Health and the Virginia Department of Environmental Quality and comply with the Clean Water Act and other federal standards. However, within the powers delegated to it by the state, where state standards are considered too lenient or otherwise inappropriate in relation to the County's goals and policies, the County may apply more stringent standards.
5. The County will continue to identify, survey and quantify areas in need of improvements to sewage disposal and water supply systems and will work with communities to identify and implement appropriate solutions such as installing systems, upgrade or replace failing systems, and, where appropriate, design, build and install communal systems.
6. The County, in cooperation with LCSA, will develop long-range plans for wastewater treatment and water supply that establish criteria for siting future wastewater treatment facilities and impoundment sites. The County will pursue this effort according to the sewer and water policies of this plan.
7. LCSA will continue to be responsible for the provision and extensions of public water and sewer service in the Suburban Policy Area and Transition Policy Area. The LCSA may enter into short- or long-term wastewater service agreements with neighboring jurisdictions if mutually agreed to by the County and LCSA.
8. The County will encourage existing residences and communities served by on-site facilities to hook into public water or sewer facilities when such facilities become available within 300 feet of a residence.
9. The County will require existing communities or residences to hook to a nearby public water or sewer system if on-site water supply or waste treatment capability has deteriorated to a point where there is a public health risk. The County, in conjunction with the LCSA, will seek ways to assist in extending sewer lines into existing communities or residences once development in surrounding areas has brought trunk sewers to the edges of these communities. The County will provide no-interest loans and other incentives to those existing communities or residences required to hook to a nearby public water or sewer system as a result of on-site water supply or waste treatment capability that has deteriorated to a point where there is a public health risk.
10. Communal water and wastewater systems must be financed by the developer or by those who will be directly served by the system. A financing plan will be required. The financing plan must be designed, organized, and operated to be financially self-sustaining to pay all costs incurred by the LCSA for operation and maintenance and to provide appropriate reserves. The County may provide financial assistance (such as loans or grants) to assist in the construction of such a facility for existing rural communities if the system is needed to solve a significant public health threat.
11. Communal water and wastewater treatment system lines that cross land outside a water or sewer service area must be protected by the establishment of permanent easements along the line prohibiting any connection outside the service area.
12. New central wastewater and water lines and facilities should be constructed in a manner that causes the least environmental risk and visual disruption. Disturbed areas (excluding permanent access easements to reach a facility) should be stabilized with native vegetation. New treatment facilities should be screened with trees, berms, and/or shrubs.

General Water Policies

1. The County will support long-term water conservation.
2. The County will continue to rely on Fairfax City's Goose Creek Impoundment and the Fairfax County Potomac River intake as the major central water supply sources. For the Suburban Policy Area and Transition Policy Area, other water-supply options including the existing Potomac River water plants operated by the Town of Leesburg and the Fairfax County Water Authority and the construction of its own water facility on the Potomac may be considered. Potential new sites in the Rural Policy Area would be considered for future storage purposes with water being released through existing streams to replenish impoundment sites downstream and to maintain environmental flows during low water months. Water quality in these areas will be maintained by the use of best management practices and by controlling non-point source pollution.
3. A Commission Permit and other appropriate approvals are required prior to the construction of any communal water system with more than 15 connections and for all rural economy uses and residential clusters using communal systems. The County, prior to approval of the Commission Permit and other required applications, will establish a service area for the communal water system.
4. The County will improve the likelihood of sustainability of groundwater by limiting the installation of additional wells and limiting the number of additional households dependent on wells through water conservation efforts and through the use of communal and/or central water systems where feasible and as approved by LCSA.
5. All communal water systems with more than 15 connections will be owned and operated by the LCSA and will be designed and installed in accordance with applicable State Health Department, LCSA, Virginia Department of Environmental Quality and County standards and regulations.
6. The County will discourage the continued use of individual wells as a source of drinking water in the Suburban Policy Area and Transition Policy Area and will encourage existing landowners to hook into

central water facilities as water lines are extended into nearby areas.

7. The Landfill Water Service Area District is established for the area in proximity to the Loudoun County Solid Waste Management Facility and for properties through which the water transmission line passes. (Refer to LCSA Water and Sewer Lines Map, pg. 2-17.) The extension of the central (municipal) water service in this district is permitted to avoid potential potable water problems for properties near the Loudoun County Solid Waste Management Facility. The water lines for the Landfill Water Service Area/ District will be sized such that they will only accommodate the maximum density permitted by the Plan (densities up to one dwelling unit per 3 acres).
8. The use of LCSA-approved communal water systems to serve the Rural and Transition Policy Areas is promoted:
 - a. To serve rural economy uses or rural and residential clusters as defined in this Plan.
 - b. To solve the potable water problems and public health problems of existing residences.
 - c. To serve new or existing institutional uses, including schools, permitted by right or by special exception in the County's rural zoning districts.
9. The extension of central (municipal) water service into the Rural Policy Area is not permitted except to serve County and Town owned and operated public facilities immediately adjacent to a Town or its JLMA. Existing Rural Villages, subject to approval of the majority of village citizens and the LCSA may extend water service to public facilities.

General Wastewater Policies

1. The County will continue to rely on and encourage efficient, economical and effective use of the Potomac Interceptor Sewer, the Broad Run Interceptor, the Russell Branch Interceptor, the Beaverdam Interceptor and the Blue Plains Wastewater Treatment Plant and Broad Run Advanced Wastewater Treatment Plant Facilities to serve the Suburban Policy Area and the Transition Policy Area.

2. A Commission Permit and other necessary approvals will be required prior to the construction of any communal wastewater treatment system. Prior to approval of the Commission Permit and other required applications, the County will establish a service area for the communal wastewater treatment system.
3. The County and LCSA will review and evaluate technological alternatives for individual and communal wastewater systems and identify throughout the County areas in which these alternatives are acceptable.
4. The use of alternative wastewater systems, not specifically addressed in the Commonwealth of Virginia Sewage Handling and Disposal Regulations, may be permitted in the Rural Policy Area and the Transition Policy Area. Such systems will be intended to serve existing residences and communities with failing septic systems and agriculturally compatible institutional and industrial uses. The proposed alternative must be reviewed and approved by the Health Department on a case-by-case basis and must provide a high degree of reliability to ensure a high level of environmental protection. The County should require liens or bonds or other methods for protecting the public from incurring any costs of correcting a failed private system.
5. The use of LCSA approved communal wastewater collection and treatment systems followed by surface or subsurface soil dispersion is promoted:
 - a. To serve the Existing Rural Villages defined in this plan.
 - b. To serve existing or new rural economy uses or rural and residential clusters as defined in this plan.
 - c. To solve wastewater or public health problems of existing residences; and
 - d. To serve new or existing institutional uses, including schools, permitted by right or by special exception in the County's Rural and Transition Policy Areas.
6. Communal wastewater treatment facilities serving institutional uses will be sized to serve only the institutional use.
7. The County, in cooperation with the LCSA and the Health Department, will identify viable alternative wastewater treatment methods to septic and drainfield-based systems, including small communal treatment plants and on-site treatment to support clustered residential development. The County will develop and implement standards including those that protect receiving stream quality for the use of such alternatives.
8. Communal wastewater treatment systems using land application (surface or sub-surface) will be preferred to communal wastewater treatment systems which discharge into streams. Wastewater land application systems will be based on soils, geology, topography, environmental impact and proven technology in the field of wastewater treatment and the location and design of these systems will be tailored to the tracts on which they are proposed.
9. The County anticipates that communal wastewater treatment plants may be designed for direct stream discharge and/or land application using the following criteria:
 - a. Communal wastewater discharge systems must be designed to maintain or exceed existing stream water quality and shall be located at least five miles upstream from a public water intake or designated public water supply area. The discharge should be designed to comply with the "Clean Water Act" standards if discharged above a public water intake.
 - b. Communal wastewater treatment plants may not discharge into natural trout streams.
10. The County will encourage LCSA to seek biological nutrient reduction systems for all treatment facilities.
11. The County will allow permanent pump-and-haul operations only to serve existing non-residential uses in the Suburban Policy Area if there is a demonstrated health risk associated with the existing on-site treatment facility and the use is a permitted use as identified by the Zoning Ordinance. Permanent pump-and-haul operations will not be permitted to serve new development or serve as a means of expanding an existing use. The Health Department and the LCSA must approve pump-and-haul operations.

12. Pump-and-haul operations are not permitted in the Rural Policy Area, Existing Rural Villages or the Transition Policy Area except as a last resort and temporary wastewater disposal method to address a proven, public health emergency. The County will determine the length of the period during which pump-and-haul disposal will be allowed.
13. The use of combined systems and other alternative sewage disposal systems, under the supervision of a qualified operator, are permitted in the Rural Policy Area and the Transition Policy Area when they are used as a component of a communal wastewater treatment facility that promotes clustered development less than the threshold of typical communal systems. The County will assist in establishing an entity to provide oversight and maintenance services for the operation of new technology, alternative individual and communal wastewater treatment systems.
14. The County (through a partnership among such agencies as LCSA, the Health Department and Housing Services) will pursue funding sources to rehabilitate homes that currently lack adequate indoor plumbing.
15. The extension of central sewer (wastewater) service into the Rural Policy Area is not permitted except to serve County and Town owned and operated public facilities immediately adjacent to a Town or its JLMA. Existing Villages subject to approval of the majority of village residents and the LCSA may extend communal wastewater service to public facilities.

B. Transportation

An efficient transportation system is vital to the livability of a community and to the quality of residents' daily lives. Efficiency is achieved through linking land use and transportation planning, so there is enough road and transit capacity to accommodate growth and so the development occurs in locations that will ensure maximum efficiency of the transportation investment. The County's strategy for addressing transportation needs is described in the *Revised Countywide Transportation Plan* (Revised CTP).

The County maintains close contact with VDOT and seeks its support and cooperation in implementing the Revised CTP. The County sets performance standards for private roads and controls their implementation through the rezoning and site planning process.



An efficient transportation system is achieved by linking land use and transportation planning.

The policies in the Revised CTP and *Revised General Plan* clarify the County's land use and transportation strategies for the Suburban Policy Area, the Transition Policy Area, the Towns Policy Area and the Rural Policy Area. Overall, the policies affirm that the County will direct most of its transportation resources in the next twenty years to the Suburban Policy Area and the Towns. Only basic safety improvements to roads in the Rural Policy Area are anticipated and planned road improvements in the Transition Policy Area will be modified to reflect the reduction of development densities. For a complete description of the County's transportation policies, refer to the Revised CTP.

C. Solid Waste Management

The Code of Virginia and the Virginia Solid Waste Management Regulations provide statutory and regulatory authority and responsibility to units of local government for planning solid waste services. Localities are to form solid waste planning districts and adopt and implement solid waste management plans (SWMP) which are to be reviewed and revised as needed and at least every five years. The Loudoun County Solid Waste Management Planning District (LCSWMPD) is comprised of the County and all incorporated Towns except Leesburg, which is its own planning district. Solid-waste management is an essential service for residents and businesses in the County. These services are delivered through a public/private partnership as outlined in the Loudoun County Solid Waste Management Plan (LCSWMP). The LCSWMP was developed in collaboration with the Solid Waste Citizens' Planning Committee in 1994-1995 and adopted by the Board of Supervisors in 1995. It is the plan of record for the most recent submittal to the Virginia Department of Environmental Quality.

The LCSWMP provides a needs assessment of solid waste management service requirements in the district and addresses how the district members intend to meet those needs. It includes substantial text and tables that describe both the waste generation and waste handling capacity of the public solid waste facilities and of private sector entities that provide solid waste management services in the County. The LCSWMP also includes a capital facilities component. As such, while not entirely in the format of a County service plan, the LCSWMP functions as one.

The Loudoun County Solid Waste Management Facility is the County's solid-waste disposal facility. The County is currently constructing a \$2.3 million expansion to meet capacity demands through 2012. The County owns and operates recycling centers at the landfill and in the communities of Arcola, Hillsboro, Lovettsville, Lucketts, Middleburg, Philomont, and Sterling Park. The Town of Leesburg owns and operates three sites within the town limits. An additional recycling center for western Loudoun is programmed in the current capital improvements planning period.

Solid Waste Management Policies

1. The County Solid Waste Management Plan will identify the type and level of service to be provided in the community.
2. The County will continue to implement an integrated solid waste management strategy that places priority on reduction, reuse, and recycling of solid waste above resource recovery, incineration, and disposal into landfills.
3. The County landfill will continue to exist to ensure that the County always has an acceptable alternative for local disposal of waste should other waste disposal alternatives fail or become ineffective.
4. The County will continue to seek private sector support for the provision of current and future Solid Waste Management Services. To this end, the County will define facilities and location and siting criteria for private facilities consistently in Section 1080 of the Codified Ordinance and the Zoning Ordinance.
5. The County encourages the co-location of government facilities, including recycling centers, where feasible and where they can function effectively.

6. The County will develop a hazardous waste education program and increase residential access to the safe disposal of hazardous waste to protect groundwater resources.

D. Energy and Communication Facilities

Gas, electrical and communication service, all provided by the private sector, are viewed as essential components of daily life. The County supports the timely delivery of these services to businesses and households as development occurs, but seeks to minimize the negative visual impacts through regulations and the Commission Permit process.

The growth of the telecommunications industry led to the County's adoption of the 1996 *Strategic Land Use Plan for Telecommunication Facilities*. These policies provide guidance in terms of priority, location, and performance standards.



The County's 1996 Strategic Land Use Plan for Telecommunication Facilities provide performance standards guidance for the telecommunications industry.

The County also continues to experience an increase in new-technology commercial space demands. These new technology companies, such as computer data centers and satellite ground stations, often arrive with disproportionately large physical capital inventories and lower workforce levels per square foot of space. As a result, they have a positive net fiscal impact to the County but have specialized needs in terms of infrastructure, such as additional electrical power and high-speed telecommunication pathways, which may require proactive changes to existing land use requirements. The County should address this emerging issue and develop policies for capital-intensive technology industries that are flexible enough to meet the needs of the industry but are effective in preventing harmful environmental impacts on the community.

Energy and Communication Policies

1. The County will require the grouping and burying of utility lines and facilities to the extent permitted by law.
2. Areas disturbed by public utility expansions should be replanted and/or reforested and screened from adjacent uses.
3. High-tension power lines, communications towers, and similar facilities should be sufficiently separated from adjacent residential uses to minimize any scientifically recognized potential health and safety risk.
4. Electric generation facilities that use clean burning and environmentally sound and proven fuel sources for power generation can be located only where their impact on the surrounding land uses and the environment is compatible.
5. The County should proactively study and develop policies and implementation schemes that accommodate the changing technological requirements of capital-intensive technology industries, while balancing any potential harmful environmental effects on the community.
6. The County will develop and implement a comprehensive utilities plan to address the impacts and location requirements of energy and communications facilities.